REMARKS

Claims 1-22 are pending in the present application.

Reconsideration of the claims is respectfully requested.

Request for Withdrawal of Finality of Office Action

The Office Action mailed August 17, 2009 was made final. Paper No. 20090805, page 9. Applicants respectfully request withdrawal of the finality of that Office Action. The MPEP states:

> Under present practice, second or any subsequent actions on the merits shall be final, *except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement* filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

MPEP § 706.07(a), page 700-82 (emphasis supplied). The Office Action introduces a new ground of rejection – specifically the rejection of claims 4 and 17 under 35 U.S.C. § 103(a) over the combination of U.S. Patent No. 6,665,297 to *Hariguchi et al* in view of U.S. Patent Application Publication No. 2001/0027479 to *Delaney et al* and further in view of U.S. Patent No. 6,625,612 to *Tal et al*. Paper No. 20090805, page 8.

The combination of *Hariguchi et al*, *Delaney et al* and *Tal et al* has never been previously cited as a basis for rejecting any claim, and therefore constitutes a new ground of rejection.

This new ground of rejection was not necessitated by amendment of the claims. In response to the prior Office Action, no amendments to claims 4 and 17 (the claims now rejected under the new grounds) were submitted.

This new ground of rejection was not based on information submitted since the previous Office Action. No Information Disclosure Statement has been filed in this application since the previous Office Action.

Accordingly, the Office Action cannot be made final, and withdrawal of the finality is respectfully requested.

35 U.S.C. § 103 (Obviousness)

Claims 1-3, 5-14 and 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,665,297 to *Hariguchi et al* in view of U.S. Patent Application Publication No. 2001/0027479 to *Delaney et al*. Claims 4 and 17 were rejected under 35 U.S.C. § 103(a) over *Hariguchi et al* in view of *Delaney et al* and further in view of U.S. Patent No. 6,625,612 to *Tal et al*. These rejections are respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142, p. 2100-127 (8th ed. rev. 7 July 2008). Absent such a *prima facie* case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.*

To establish a prima facie case of obviousness, three basic criteria must be met: First, there must be some reason – such as a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art – to modify the reference or to combine reference teachings. MPEP § 2142, pp. 2100-127 to 2100-128 (8th ed. rev. 7 July 2008); MPEP § 2143, pp. 2100-128 to 2100-139; MPEP § 2143.01, pp. 2100-139 to 2100-141. Second, there must be a reasonable expectation of success. MPEP § 2143.02, pp. 2100-141 to 2100-142 (8th ed. rev. 7 July 2008). Finally, the prior art reference (or references when combined) must teach or suggest <u>all</u> of the claim limitations. MPEP § 2143.02, pp. 2100-141 to 2100-142.

Independent claims 1 and 10 claim each recite that each hast table is allocated a group of the memory blocks based on a size of the respective hash table. Similarly, independent claim 14 recites

that a number of memory blocks allocated to a hash table is based on a size of the respective hash table. Such a feature is not found in the cited references. The cited portion of *Delaney et al* actually teaches the exact opposite of allocating memory blocks based on a size of the hash table, instead teaching that the hash table is sized to fit within a fixed size group of memory blocks:

> [0043] Each peer client maintains two hash-tables which contain information about data package location: a local-data packages table and a network-data packages table. The local-data packages table is a hash-table of data packages which reside on the storage medium or media of the peer client itself. The network-data packages table is a hash-table of data packages which reside on the storage medium or media of other clients on the local network. This table contains the local area network address of the peer client on which each data package is being stored. The size of this hash-table is preferably limited in order to reduce memory consumption. More preferably, each entry in the table has a time-stamp, such that <u>*older entries are purged when the size of the table exceeds the upper permissible limit*</u>.

Delaney et al, ¶ [0043] (emphasis added).

Claim 2 recites that each hash table is allocated a smallest number of memory blocks sufficient to hold prefixes for which no collision occurs within the respective hash table. Similarly, claim 15 recites maintaining each hash table within a smallest number of memory blocks sufficient to hold all required prefixes for which no collision occurs within the respective hash table. Such features are not found in the cited references. The cited portions of *Hariguchi et al*, taken in context, merely describe <u>*what*</u> is stored in the routing table when and how routing table entries are removed, rather than allocating a smallest number of memory blocks to the hash table that is sufficient to hold the entries:

> Because the hash tables 70 (FIG. 2) match masked portions of the destination address, the hash tables will often have collisions when the tables are updated. <u>*The CAM based routing table 80 is used to avoid hash collisions in the hash-based routing tables 70 by storing the destination address, prefix length and, in an alternate embodiment, the output pointer, when a hash table already has an entry with the same hash value as the destination address*</u>: During searching, the hash tables do not have collisions and multiple matches or hits in the hash tables and CAM

> are resolved in a subsequent stage.
>
> . . . .
>
> When an entry is to be deleted, the destination address of the route entry is searched in the routing tables. The hash match register 171 of the priority encoder 170 is checked. The output pointer is removed from a hash bucket if the information in the hash match register 171 matches the information in the route entry to be removed. At the same time, the CAM match register 146 is checked. When the CAM hit/miss flag indicates a hit and unless the information in the hash match register 171 matches the information in the route entry to be removed, the route entry is removed from the CAM when the information in the CAM match register 146 matches the destination address for the associated prefix length.

Hariguchi et al, column 6, lines , column 9, lines 12-20 (emphasis added). The above-quote portions of *Hariguchi et al* say nothing of the size of routing tables or allocation of memory blocks to a routing table. *Hariguchi et al* contains no discussion of the allocating memory based on the size of the hash table to be stored therein, but instead teaches that a fixed size memory is employed with entry space reused for other CAM entries once the content of a particular entry is deleted:

> When an entry is deleted from a hash table, a CAM entry may be moved to that deleted entry in the hash table to enhance CAM utilization. If the CAM stores a destination address that can be stored in that hash table then that destination address is deleted from the CAM and stored in the hash table. In other words, an entry is moved from the CAM to the hash table if the hash value of the destination address of the entry in the CAM is equal to the index of the hash table in which the deleted address was stored.

Hariguchi et al, column 9, lines 35-43.

Claims 3, 12 and 16 each recite that the variable number of memory blocks allocated to a hash table is limited to a predetermined maximum number. Such a feature is not found in the cited references. The cited portion of *Delaney et al* teaches that the size of the hash table is limited to reduce memory consumption in storing that table (within a fixed amount of memory), not that the variable number of memory blocks assigned to a hash table is limited to a predetermined maximum.

Claim 5 recites that each hash table contains different length prefixes. Claim 18 similarly

recites storing, in each of a plurality of hash tables, prefixes of a different length than prefixes contained in any other of the plurality of hash tables. Such a feature is not found in the cited references. *Hariguchi et al*, cited in the Office Action as teaching this feature, actually only teaches that multiple hash tables 70 are used, and that separate hash circuits 82 are each dedicated to parallel searching of the hash tables based on a unique prefix length. *Hariguchi et al* does not teach that each hash table 70 stores only prefixes of a different length than those in the remaining hash tables, as suggested in the Office Action. Instead, use of multiple hash tables 70 in *Hariguchi et al* appears to be motivated by speeding up "pipelined" searching, such that each hash circuit searches the hash tables consecutively while the remaining hash circuits similarly search the other hash tables consecutively, with each hash table containing entries for any possible prefix length.

Therefore, the rejection of claims 1-20 under 35 U.S.C. § 103 has been overcome.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at ***dvenglarik@munckcarter.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK CARTER, LLP

Date: 10-19-2009

Daniel E. Venglarik
Registration No. 39,409

P.O. Box 802432
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: *dvenglarik@munckcarter.com*